

REMARKS

Claims 1-7, 10-12, 16-22, 25-27, 31-34, 36-43 and 45-58 are pending. Claims 1-3, 10, 16-18, 25, 31, 32, 36, 40, 41, 49, and 53 are currently amended. Claims 8-9, 13-15, 23, 24, 28-30, 35, 44 and 59 are canceled.

Applicant notes that a portion of claim 48 was inadvertently omitted in the Amendment filed on October 23, 2006. The full text of claim 48 appears above, and was previously presented to the Examiner in an Amendment filed on January 27, 2006.

The Claims Are Sufficiently Definite

The Examiner rejected claims 32 and 36 under 35 U.S.C. § 112, second paragraph, as indefinite. Applicant respectfully traverses the Examiner's rejections.

With regard to claim 32, the Examiner indicated it was unclear whether the first computing device physically migrates the data structure to the second computing device. Claim 32 depends from claim 1. Claim 1 recites, "a first computing device configured to: receive an initialization packet originating from a client; store a data structure associated with a connection to the client; select a computing device to service the client; when the first computing device is selected to service the client, bind the data structure associated with a connection to the client to an application of the first computing device; and when the first computing device is not selected to service the client, migrate the data structure associated with the connection to the selected computing device." Claim 32 further recites, "wherein the first computing device is configured to migrate the data structure by: storing a reference to a second computing device; and associating the stored reference with the data structure." Applicant respectfully submits that one of skill in the art, after reviewing the specification, would understand the use of the term "migrate" in claim 1, and would further recognize that claim 32 is designed to cover particular embodiments of the migrating the data structure. See, *e.g.*, Spec., p. 21-25, 31-34, 43-46 and Figures 5a-5c, 9a-9c and 10a-10c.

Applicant submits that the migration is physical in that a physical change to the data structure occurs which results in the data structure being migrated. The change may, in some embodiments, comprise moving the data structure from a first table to a second table. For

example, in some embodiments, migrating the data structure comprises moving a record from a temporary table to a forward table. See, *e.g.*, Spec., p. 34. In some embodiments, migrating the data structure comprises forwarding a packet with connection information to the second computing device, which causes the second computing device to establish a data structure of a connection with the client and to send an acknowledgement to the first computing device. In some embodiments, the first computing device responds to the acknowledgement by deleting the data structure from a temporary table. See, *e.g.*, Spec., p. 46 and Figure 10c. Applicant thus respectfully submits that claim 32 is sufficiently definite.

With regard to claim 36, the Examiner concerns appear directed to an antecedent basis issue. Applicant has amended claim 36 to address the Examiner's concerns.

Claims 1-3, 7, 10-12, 16-18, 22, 25-27, 31-33 and 37-42 Are Not Obvious over Aversa in view of Snoeren

The Examiner has rejected claims 1-3, 7, 10-12, 16-18, 22, 25-27, 31-33, 37-42, 46-48, 53, 54 and 57 under 35 U.S.C. § 103(a) as obvious over Aversa et al., "Load Balancing a Cluster of Web Services Using Distributed Packet Rewriting," January 1999 ("Aversa"), in view of Snoeren, et al., "TCP Connection Migration." Applicant respectfully traverses the Examiner's rejections.

As an initial matter, both Aversa and Snoeren are vague and do not provide a level of detail sufficient to support the alleged teachings cited by the Examiner. The Examiner appears to be relying on inherency, and to the extent the Examiner makes implied or asserts specific inherency arguments, Applicant reserves the right to require evidentiary support for the Examiner's assertions. Applicant also believes that Snoeren is not prior art, and reserves the right to traverse or antedate Snoeren through a declaration under 37 CFR 1.131 or other method.

Independent claims 1 and 16 as amended recite, "when the first computing device is not selected to service the client, migrate the unbound data structure associated with the connection to the selected computing device" (or similar language). The Examiner does not contend that Aversa teaches migrating a data structure, but points to Snoeren as teaching migration of a data structure. Snoeren, however, teaches synchronizing two separate TCP

connections such that the context is identical, and thus in fact teaches away from the claimed invention. See Snoeren, page 5. Thus, Aversa, alone or in combination with Snoeren, does not teach, suggest or motivate a computing device configured to “migrate the unbound data structure associated with the connection to the selected computing device.” Claims 2, 3, 7 and 31-33 depend from claim 1 and claims 17, 18, 22, and 40-42 depend from claim 16, and are thus allowable at least by virtue of their dependencies. Thus, claims 1-3, 7, 16-18, 22, 31-33 and 40-42 are allowable.

Independent claims 10, 25 and 53 as amended recite, “associate an application of the first computing device with a data structure ... disassociate the application of the first computing device from the data structure; and subsequently output a reference to the data structure associated with the connection” (or similar language). The Examiner relies on Snoeren for the recited disassociating and outputting. In Snoeren, however, corresponding hosts “synchronize two separate TCP connections such that the context is identical” and “establishment of the second connection terminates the first.” Snoeren, page 5. Thus, Aversa, alone or in combination with Snoeren, does not teach, suggest or motivate “disassociating the application of the first computing device from the data structure; and subsequently outputting a reference to the data structure associated with the connection.” In fact, Snoeren teaches away from the claimed invention, as discussed above. Claims 11, 12 and 37-39 depend from claim 10, claims 26, 27 and 46-48 depend from claim 25, and claims 54-57 depend from claim 53, and are thus allowable at least by virtue of their dependencies. Thus, claims 10-12, 25-27, 37-39, 46-48 and 53-57 are allowable.

In addition, the dependant claims contain additional elements that are not taught, suggested or motivated by Aversa, alone or in combination with Snoeren or the admitted prior art. For example, claims 38 and 47 recite, “the application of the first computing device is of a first type and the application of the second computing device is of a second type.” The Examiner contends that Aversa teaches multiple application types and that Snoeren would motivate combining multiple application types with disassociating and outputting. Snoeren, however, teaches away from such a combination because Snoeren teaches “two separate TCP connections such that the context is identical.” Snoeren at page 5. In another example, claim 57 recites “re-

associating the application of the first server to the data structure associated with the connection with the client.” Snoeren teaches away from such a combination, as Snoeren teaches “establishing a completely separate connection to continue communication.” See Snoeren at 5. Applicant reserves the right to argue that additional elements of the claims are not taught, suggested or motivated by Aversa, alone or in combination with Snoeren and any admitted prior art.

Accordingly, claims 1-3, 7, 10-12, 16-18, 22, 25-27, 31-33, 37-42, 46-48, 53, 54 and 57 are allowable.

Claims 4-6, 19-21, 34 and 43 Are Not Obvious over Aversa in view of Boucher

The Examiner has rejected claims 4-6, 19-21, 34 and 43 under 35 U.S.C. § 103(a) as obvious over Aversa in view of U.S. Patent No. 6,334,153 issued to Boucher, et al. Applicant respectfully traverses the Examiner’s rejections.

Independent claims 4 and 19 recite, “forward the packet and a reference to an associated connection endpoint to a network protocol stack of the first computing device that is external to an operating system of the first computing device ... when the packet is not associated with a connection that corresponds to an application of the first computing device, selectively encapsulate the packet and forward the encapsulated packet” (or similar language). The Examiner relies on Boucher for the recited network protocol stack that is independent of the operating system of the first computing device. Boucher, however, does not teach, suggest or motivate a “network protocol stack” that is independent of the operating system. Instead, Boucher teaches a single state machine “bypassing sequential protocol stack processing.” To the extent Boucher employs any protocol stack, it is the protocol stack of the host operating system employed “in a conventional manner.” See Boucher at Col. 5, line 41 to Col. 6, line 5. Thus, Aversa, alone or in combination with Boucher and/or any admitted prior art, does not teach, suggest or motivate a first computing device configured to “forward the packet and a reference to an associated connection endpoint to a network protocol stack of the first computing device that is external to an operating system of the first computing device.” In addition, Aversa teaches away from the claimed combination because Aversa teaches packet re-writing. Claims 5, 6, 34

and 36 depend from claim 4 and claims 20, 21, 43 and 45 depend from claim 19, and are allowable at least by virtue of their dependencies. Applicant reserves the right to argue that additional elements of the claims are not taught, suggested or motivated by Aversa, alone or in combination with Boucher and any admitted prior art.

Accordingly, claims 4-6, 19-21, 34, 36, 43 and 45 are allowable.

Claims 36, 45, 49-52, 55, 56 and 58 Are Not Obvious Over Aversa in view of Snoeren and Boucher

The Examiner has rejected claims 36, 45, 49-52, 55, 56 and 58 under 35 U.S.C. § 103(a) as obvious over Aversa in view of Snoeren and Boucher. Applicant respectfully traverses the Examiner's rejections.

Claim 36 depends from claim 4 and claim 45 depends from claim 19, and as discussed above Aversa, alone or in combination with Boucher, does not teach, suggest or motivate a network protocol stack of the first computing device that is external to an operating system of the first computing device. Snoeren does not teach, suggest or motivate the missing teachings. Accordingly, claims 36 and 45 are not rendered obvious by Aversa, alone or in combination with Snoeren and Boucher, and are allowable.

Independent claim 49, as amended, and independent claim 58 recite, "a protocol stack of the first server that is external to an operating system of the first server" (or similar language). As discussed above Aversa, alone or in combination with Snoeren and Boucher, does not teach suggest or motivate a protocol stack of the first server that is external to an operating system of the first server. Claims 50-52 depend from claim 49 and are allowable at least by virtue of their dependencies. Applicant reserves the right to argue that additional elements of the claims are not taught, suggested or motivated by Aversa, alone or in combination with Snoeren, Boucher and any admitted prior art.

Accordingly, claims 49-52 and 58 are allowable.

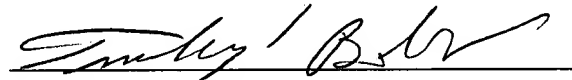
Conclusion

Therefore, for these reasons and others, claims 1-7, 10-12, 16-22, 25-27, 31-34, 36-43 and 45-58 are not anticipated or rendered obvious by Aversa, alone or in any combination with Snoeren and Boucher. In the event the Examiner disagrees or finds minor informalities, Applicant respectfully renews its request for a telephone interview to discuss the Examiner's issues and to expeditiously resolve prosecution of this application. Accompanying this Amendment is a Second Request for Telephone Interview in the event the Examiner does not agree that the claims are allowable over the cited references.

In closing, Applicant respectfully requests the Examiner to enter these amendments and to reconsider this application and its early allowance. The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC



Timothy L. Boller
Registration No. 47,435

TLB:jms

701 Fifth Avenue, Suite 5400
Seattle, Washington 98104-7092
Phone: (206) 622-4900
Fax: (206) 682-6031

Enclosure:
Request For Telephone Interview

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